

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A process for the formation of nanostructures that includes:

forming nucleation sites, in volume, by ~~the irradiation of~~ localized deposition of atoms suitable for the formation of such sites on a substrate by means of a focused beam of comprising silicon or germanium ions ~~, by localised deposition of atoms suitable for the formation of such sites,~~ ; and

growing by chemical vapor deposition the nanostructures on the nucleation sites thus formed, wherein

the nanostructures comprise a III-V semiconductor material, or silicon or germanium.

Claim 2 (Canceled)

Claim 3 (Currently Amended): The process according to claim 1, wherein the substrate is ~~[[in]]~~ a dielectric material.

Claim 4 (Previously Presented): The process according to claim 3, wherein the substrate is a silicon dioxide ( $\text{SiO}_2$ ) or an aluminium oxide ( $\text{Al}_2\text{O}_3$ ) or a silicon nitride ( $\text{SiN}_x$ ).

Claims 5-6 (Canceled)

Claim 7 (Currently Amended): The process according to claim ~~[[6]]~~ 1, wherein said nanostructures ~~formed being~~ comprise silicon or germanium and are created respectively by means of dichlorosilane or germane, as a gaseous precursor.

Claims 8-10 (Canceled)

Claim 11 (Currently Amended): The process according to claim 1, wherein said ~~nanostructure being in~~ nanostructures comprise gallium arsenide (GaAs), or ~~[[in]]~~ gallium nitride (GaN), or ~~[[in]]~~ gallium phosphide (GaP).

Claim 12 (Canceled)

Claim 13 (Previously Presented): The process according to claim 1, said nanostructures being in 3 dimensions.

Claim 14 (Previously Presented): The process according to claim 1, said nanostructures being of maximum diameter (D) between 1 nm and 15 nm.

Claim 15 (Currently Amended): The process according to claim 1, said nanostructures being formed at a density between  $10^8/\text{cm}^2$  and  $10^{13}/\text{cm}^2$ .

Claims 16-25 (Canceled)

Claim 26 (New): The process according to claim 4, wherein the substrate is a silicon dioxide ( $\text{SiO}_2$ ).

Claim 27 (New): The process according to claim 4, wherein the substrate is an aluminium oxide ( $\text{Al}_2\text{O}_3$ ).

Claim 28 (New): The process according to claim 4, wherein the substrate is a silicon nitride ( $\text{SiN}_x$ ).

Claim 29 (New): The process according to claim 1, wherein the substrate is a metal.

Claim 30 (New): The process according to claim 1, wherein the focused beam comprises silicon ions.

Claim 31 (New): The process according to claim 1, wherein the focused beam comprises germanium ions.

Claim 32 (New): The process according to claim 11, wherein said nanostructures comprise gallium arsenide (GaAs).

Claim 33 (New): The process according to claim 11, wherein said nanostructures comprise gallium nitride (GaN).

Claim 34 (New): The process according to claim 11, wherein said nanostructures comprise gallium phosphide (GaP).